Hour-Exam on Friday, June 21

- Covers material in Chapters 1, 2, 3
- Bring #2 pencil and picture ID.
- You may use a calculator.
- You may NOT use cell phones or other wireless devices.
- You may NOT use books or notes.
- There will be room on the exam paper for calculations.

Extra open lab session this week: Thursday 2:30 – 5:00 in Faner 1032 1. What is the degree of vertex A in the graph below?





- A) Graph I only
- B) Graph II only
- C) Both Graph I and Graph II
- D) Neither Graph I nor Graph II

3. Which of the graphs below have Euler circuits?



- A) I only
- B) II only
- C) Both I and II
- D) Neither I nor II

4. An optimal Eulerization of this graph can be obtained by duplicating



A) 6 edges. B) 7 edges. C) 8 edges. D) 9 edges.

5. A river runs through the middle of this city. There are four islands and eleven bridges as shown in the figure below. A graph that appropriately models this situation would have:



- A) 11 vertices & 6 edges
- B) 4 vertices& 11 edges
- C) 6 vertices & 11 edges

D) 6 vertices & 17 edges

6. A Hamilton circuit on the graph below is given by:



A) A,D,C,B,F,G,H,E,A

C) A,B,C,D,H,G,F,E,A

D) A,B,C,D,H,G,F,E,H,D,A

B) A,B,C,D,H,G,F,E



7. The number of Hamilton circuits in K_6 is

- A) 15
 B) 42
 C) 120
- D) 840

8. The cost of the nearest-neighbor tour starting at A is



9. The cheapest-link tour is given by



10. The number of edges in a tree with 24 vertices is:

- A) 25
- B) 24!
- C) 23
- D) 276

11. Use Kruskal's algorithm to find the total weight of the minimum spanning tree:



12. Using Kruskal's algorithm to find an MST, which edge should we choose third?



D) DE

